REMARKS

Claims 1-5 are pending and under consideration in the above-identified application.

In the Office Action dated February 21, 2008, the Examiner rejected claims 1-5.

With this Amendment, claims 1 and 5 were amended and claims 6 and 7 were added. No new matter has been introduced as a result of the amendments.

I. 35 U.S.C. § 103 Obviousness Rejection of Claims

Claims 1, 2, 3 and 5 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Oesten et al. (US 2001/0046628 A1) in view of Spitler et al. (US 2004/0197657). Applicants respectfully traverse this rejection.

Claims 1 and 5 require each coated particle of the anode active material to have a layered structure. Specifically, the claims require an inner particle made of a compound oxide of lithium and nickel, the outer surface of which is covered at least in part by a coating layer. The claims also require that the coating layer is adhered to the outer surface and made of a homogeneous lithium-titanium compound. The coating required by claims 1 and 5 significantly improves the high temperature property of lithium nickel oxide, a drawback of lithium nickel oxide, without decreasing lithium ion conductivity. Specification, Page 6. Furthermore, compared to surfaces where the coating consists of a mixture of compound oxides, the homogenous coating layer required by claims 1 and 5 significantly improves conductivity and as a result maintains capacity and cycle durability. Specification, Pages 5 -6, 33-34 & Table 1.

Oesten et al. teaches an active material made of lithium mixed oxide particles which is coated with a mixture of alkali metal compounds and metal oxides. Oesten et al., Paragraphs [0001]; [0024]; [0032-0034]. Oesten et al. teaches that the function of the coating mixture is to improve stability towards acids. Oesten et al., Paragraphs [0033]; [0037]. However, Oesten et al. does not teach or even fairly suggest a coating layer adhered to the outer surface of a particle, which is

made of a homogeneous lithium-titanium compound, as required by claims 1 and 5. Furthermore, Oesten et al., does not teach or even fairly suggest that the mixture of alkali metal compounds and oxides, would improve conductivity and maintain capacity and cycle durability and applicant contends that it does not. In fact, as discussed in the Specification, the known art has failed to provide a coating layer that significantly improves high temperature property of lithium nickel oxide, without decreasing the conductivity of lithium ions. Specification, Page 6. The Examiner is requested to provide proof supporting any assertions that the Oesten et al. coating improves conductivity and maintains capacity and cycle durability.

Spitler et al. teaches a lithium titanate spinel oxide as the positive material for the cathode of a lithium ion battery. Spitler et al., Paragraph [0001]. Additionally, Spitler et al. teaches making the compound by blending lithium titanate spinel oxide compounds into the active material. Spitler et al., Paragraph [0017]. Spitler et al. does not, however, teach or even fairly suggest using lithium titanate spinel oxide as a coating. Furthermore, Spitler et al. does not teach or even fairly suggest a process of forming the lithium titanate spinel oxide which is characterized by adhesion properties between the coating and the surface being coated. Specification, Page 14.

Thus, taken either singularly or in combination with each other, the cited references fail to teach or even fairly suggest particles of the anode active material having a layered structure with a coating adhered to at least parts of the outer surface of the inner particle and made of a homogeneous lithium-titanium compound. Thus, independent claims 1 and 5 are patentable over the cited references, as are dependent claims 2, 3 and 4 for at least the same reasons. Accordingly, Applicant respectfully requests the above rejections be withdrawn.

Claim 4 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Oesten et al. in view of Spitler et al., and further in view of Naruoka et al. (US Patent No. 6,893,766 B2). Applicants respectfully traverse this rejection.

As discussed above, Spitler et al. and Oesten et al. taken either singularly or in combination with each other do not teach or even fairly suggest a layered particle structure with a coating layer adhered to parts of the outer surface of a particle and made of a homogeneous lithium-titanium compound.

Specifically, Oesten et al. teaches a coating that is a mixture of compounds and that the function of the coating is to improve stability towards acids, not a homogenous compound that improves conductivity as required by the claims. Furthermore, the coating in Oesten et al. is not adhered to the lithium mixed oxide particles.

Spitler et al. teaches a lithium titanate spinel active material, but does not teach or even fairly suggest the active material may be used as a coating. Furthermore, Spitler et al. teaches a method for making lithium titanate spinel, which would not be appropriate for the coating required by claims 1 and 5 because the method is not characterized by adhesion properties.

As such, even though Naruoka et al. teaches a positive active material having particles in the range of 4-25 μm, the cited references do not teach the required structure of claims 1 and 5 upon which claim 4 depends. Thus, taken either singularly or in combination with each other, the cited references fail to teach or even fairly suggest particles of the anode active material having a layered structure with a coating adhered to the outer surface of an inner particle and made of a homogeneous lithium-titanium compound. As such, a dependent claim 4 is patentable over the cited references, for at least the same reasons. Accordingly, Applicant respectfully requests the above rejections be withdrawn.

II. Conclusion

In view of the above amendments and remarks, Applicant submits that all claims are clearly allowable over the cited prior art, and respectfully requests early and favorable notification to that effect.

Respectfully submitted,

Dated: May 20, 2008 By: /David R. Metzger/

David R. Metzger
Registration No. 32,919
SONNENSCHEIN NATH & ROSENTHAL LLP
P.O. Box 061080
Wacker Drive Station, Sears Tower
Chicago, Illinois 60606-1080
(312) 876-8000